

TOTTINGTON
URBAN DISTRICT COUNCIL

Annual Reports


of the

Medical Officer of Health
and Inspector of Nuisances

1913

1st January to 31st December

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Medical Officer's Annual Report.



Population, 1891	5768
„ 1901	6118
„ 1911	6769
Estimated population to the middle of the year 1914	...	...	...	6890
Estimated number of inhabited houses 1901	...	...	...	1153
„ „ „ „ 1910	...	...	...	1549
„ „ „ „ 1911	...	...	...	1591
„ „ „ „ 1912	...	...	...	1619
„ „ „ „ 1914	...	...	...	1629

Average number of persons per house, 4·22.

Area in statute acres, 2655.

To the Members of the Tottington Urban District Council.

Gentlemen,

I have the honour to present to you my Annual Report on the health of your Urban District for the year 1913.

Birth Rate. During the year under review, 119 births have been registered in the district; of this number 60 were those of males, and 59 those of females, giving a birth rate of 17·27 per thousand, against 15·66 per thousand in the year 1912.

The births occurred in the various parts of the district as shewn in the following table :

	Total	Males	Females
Chapel Ward	37	15	22
Church Ward	18	10	8
Greenmount Ward	19	9	10
Hawkshaw Ward	12	5	7
Walshaw Ward	33	21	12
	119	60	59

The birth rate for the years since the formation of the district into a separate authority, are as follows:—

Birth rate for the year 1899 was 14·1 per thousand

„	„	1900	19·6	„
„	„	1901	22·06	„
„	„	1902	17·98	„
„	„	1903	16·66	„
„	„	1904	18·60	„
„	„	1905	19·06	„
„	„	1906	17·84	„
„	„	1907	22·58	„
„	„	1808	17·19	„
„	„	1909	19·13	„
„	„	1910	18·20	„
„	„	1911	18·17	„
„	„	1912	15·66	„

An average for the previous ten years of 18·30 per 1000.

Illegitimate Births. Two births, under this heading, have been registered in the year, one male and one female.

The illegitimate birth rate is 1·68 per centum.

The illegitimate birth rate for previous years was :

In 1899	...	1·81 per cent.
1900	...	3·96
1901	...	·74
1902	...	·9
1903	...	1·9
1904	...	4·16
1905	...	3·25
1906	...	1·74
1907	...	·67
1908	...	·88
1909	...	3·25
1910	...	1·64
1911	...	3·25
1912	...	1·86

Death Rate. During the year 1913, 68 deaths have been registered in the district, two of which number were non-residents, and transferred to the district in which they resided, leaving a nett total of 66 deaths of residents.

To this number (66) must be added 9 deaths of persons ordinarily resident in Tottington, but whose deaths occurred in different institutions situated outside the district.

The total number of deaths belonging to the district is therefore 75, and of this number 35 were males and 40 females.

Two deaths occurred in institutions situated in the district. (Not an institution for the sick and infirm).

The Death Rate for the whole district for the year 1913 is 10·88 per thousand. (See Table 1 appendix).

The death rate in previous years was :

In 1899	...	17·97 per thousand
1900	...	15·35
1901	...	15·88
1902	...	12·42
1903	...	14·12
1904	...	15·81
1905	...	13·33
1906	...	15·52
1907	...	12·59
1908	...	13·69
1909	...	14·46
1910	...	12·53
1911	...	13·00
1912	...	10·68

The average death rate for the previous ten years is 13·57 per thousand.

The deaths were distributed over the various wards of the district as shewn in the subjoined table.

	Total	Males	Females
Chapel Ward ...	13	7	6
Church Ward ...	12	6	6
Greenmount Ward...	11	4	7
Hawkshaw Ward ...	10	6	4
Walshaw Ward ...	22	8	14
	<hr/> 68	<hr/> 31	<hr/> 37
Deduct two deaths transferred from this district, to other districts in which they ordinarily resided....	2	1	1
	<hr/> 66	<hr/> 30	<hr/> 36
Add nine deaths of residents occurring in institutions outside the district ...	9	5	4
	<hr/> 75	<hr/> 35	<hr/> 40

Infantile Mortality. The number of deaths occurring under the age of one year in 1913, was five: two males and three females.

The mortality rate, per thousand, nett births is 42·01.

The deaths occurring under this heading were distributed over the district as shewn in the following table.

	Total	Males	Females
Chapel Ward ...	2	1	1
Church Ward ..	1	0	1
Greenmount Ward ...	0	0	0
Hawkshaw Ward ...	0	0	0
Walshaw Ward ...	2	1	1
	<hr/> 5	<hr/> 2	<hr/> 3

The infantile mortality in previous years was :

In 1900	...	63·5 per thousand
1901	...	133·33
1902	...	100·0
1903	...	57·14
1904	...	116·66
1905	...	97·5
1906	...	156·56
1907	...	74·08
1908	...	97·34
1909	...	118·11
1910	...	139·34
1911	...	105·69
1912	...	93·45

Average death rate for the ten years 105·58.

Mortality over the age of one year and under the age of five years. The number of deaths occurring between the above-named group of ages was two.

Mortality over the age of five years and under the age of fifteen years. Number of deaths between these ages was one.

Mortality over the age of fifteen years and under the age of twenty-five years. The number of deaths between these ages was one.

Mortality over the age of twenty-five years and under the age of sixty-five years. The number of deaths occurring under this heading was thirty-one.

Mortality amongst aged people : over sixty-five years. The number of deaths occurring over the age of sixty-five years was thirty-four.

Public Health Regulations, (Tuberculosis) 1912. Sixteen cases of Tuberculosis have been notified under the above regulations during the year ; of this number 8 were cases of Pulmonary Tuberculosis, and 8 Tuberculosis of other

organs. The pulmonary cases were notified from Chapel Ward 2, Greenmount Ward 5, and Hawkshaw Ward 1. The cases of Tuberculosis of other organs were notified from Chapel Ward 2, Church Ward 1, Greenmount Ward 1, and Walshaw Ward 4.

Of the 8 cases of Pulmonary Tuberculosis notified, 7 were females, and one a male, and of the 8 cases notified as being Tuberculosis of other organs, 5 were females and 3 males.

The occupations of the persons suffering from the Pulmonary form of the disease were: weavers 2, school teacher (religious) 1, domestic 3, milliner 1, and general labourer 1, whilst the occupations of those suffering from the disease affecting other organs than the lungs were: school children 3, weavers 2, domestic 1, pentagrapher to engravers 1, and labourer in a bleachworks 1.

Each of the cases notified was visited by me and information given as to the sanitary measures to be adopted, and as to the gratuitous supply of literature, sanitary handkerchiefs, pocket spittoons, and disinfectants, by the Health Department of the Urban District of Tottington.

Two of the cases of Pulmonary Tuberculosis were treated in the Sanatorium at Holcombe, one in the Sanatorium at Abergele, and one in the Workhouse hospital at Bury. The remainder were treated in their homes.

Three of the eight cases of tuberculosis of other organs were dealt with in various hospitals; the others, five in number, were treated at home.

Three deaths from the Pulmonary form of the disease have occurred during the year; one in Greenmount Ward, one in Hawkshaw Ward, and one in the Workhouse, removed from Chapel Ward.

The following Table shows the ages and locality of persons affected with Tuberculosis :

	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-45 yrs.	45-65 yrs.	Chapel Ward	Church Ward	Greenmount Ward	Hawkshaw Ward	Walshaw Ward	Total
Pulmonary Tuberculosis...	0	0	3	3	2	2	0	5	1	0	8
Other Organs..	0	3	4	1	0	2	1	1	0	4	8
	0	3	7	4	2	4	1	6	1	4	16

A Sanatorium situated at Holcombe, some two miles away, has been established by the Bury and District Joint Hospitals Board, of which this district is a constituent authority. It contains about 50 beds. The accommodation is preferably for early cases of Phthisis, but patients suffering from the disease in its intermediate stages are admitted. Provision for cases in an advanced stage of the disease has been made at Ainsworth. The patients are under the care of a full time Medical Officer, non-resident, and recently a resident Assistant Medical Officer has been appointed.

The patients are maintained by charges on the district from which the patient is sent, and is based on the number of days a patient is resident in the Sanatorium. No beds are specially reserved for patients coming from this district, nor does this district provide portable open air shelters, or tents.

The local authority has provided and maintained a supply of literature on the subject of the prevention of the spread of Tuberculosis, and also sanitary handkerchiefs, pocket spittoons and disinfectants, and forms required under the regulations of 1912.

I have visited every case notified, and have kept a record of cases notified and visited during the year.

Infectious Diseases. Twenty-three cases of infectious disease have been notified under the Infectious Diseases Notification Act, 1889, during the year 1913.

Of this number, 4 were cases of Erysipelas, 10 Scarlet Fever, 5 Diphtheria, 2 Enteric Fever, 1 Chicken Pox, and 1 case of acute Anterior Polio-Myelitis, in addition to 16 cases of Tuberculosis notified under another regulation, and dealt with separately in this report under the heading "Public Health Regulations"; a total of 39 cases of all kinds.

Five cases of Diphtheria, 2 of Enteric Fever, 8 of Scarlet Fever, and 1 of Chicken Pox were removed to the hospital for isolation and treatment. The remainder were isolated and treated at their homes.

Four of the cases of Pulmonary Tuberculosis were removed to hospital, and three of the cases of tuberculosis of other organs as previously mentioned.

The cases notified occurred in the various wards of the district as shown hereunder.

	Chapel Ward	Church Ward	Greenmount Ward	Hawkshaw Ward	Walshaw Ward	Total
Erysipelas	1	1	0	0	2	4
Scarlet Fever	2	0	0	5	3	10
Diphtheria.....	0	0	1	0	4	5
Enteric Fever	0	0	0	1	1	2
Pulmonary Tuberculosis.....	2	0	5	1	0	8
Tuberculosis of other Organs...	2	1	1	0	4	8
Polio-Myelitis	0	0	1	0	0	1
Chicken Pox	0	1	0	0	0	1

The following table shows the distribution of cases of infectious disease in previous years:—all kinds.

	Chapel Ward.	Church Ward.	Greenmount Ward.	Hawkshaw Ward.	Walshaw Ward.	Total.
In 1901.....	3	2	8	3	3	19
1902.....	8	0	3	3	7	21
1903.....	13	5	4	8	20	50
1904.....	16	6	26	20	14	82
1905.....	14	2	29	0	4	49
1906.....	4	0	7	2	6	19
1907.....	5	0	28	2	3	38
1908.....	3	5	4	1	5	18
1909.....	10	8	28	0	16	62
1910.....	16	20	19	0	26	81
1911.....	10	6	14	26	4	60
1912.....	3	0	5	2	5	15
1913.....	7	3	8	7	14	39

Scarlet Fever. The number of cases of this disease notified during the year was 10, of which number 8 were removed to the Isolation hospital at Bury. Three cases were notified from Walshaw Ward, 5 from Hawkshaw Ward, and 2 from Chapel Ward. No deaths occurred from this disease. In connection with the notification of these cases, I visited the Schools in the neighbourhood, which were attended by the cases notified. In all the cases the infection was very probably introduced from adjoining districts in which the disease was at the time very prevalent; considering this, I think it is a matter for congratulation that the disease did not become epidemic in our district.

Measles. This disease was prevalent in the central part of the district during the month of March, and affected children principally attending St. John's Free Church and the Wesleyan Schools, the latter school was closed on my recommendation on the 13th of March to the 20th. Both schools mentioned were disinfected, and cleaned.

The disease made its appearance in June, in the Walshaw portion of the district, and I visited the school in this Ward on several occasions, and had the schools thoroughly fumigated, and cleaned. These schools were not closed.

In July the disease threatened to assume epidemic proportions in the Greenmount district, in consequence of which I visited Greenmount School and arranged for its disinfection. The Infant department was principally affected, but closure of the school was not deemed advisable: on enquiry I found that most of those absent had been kept at home owing to illnesses unassociated with measles, or from fear of the children contracting the disease by attendance at school.

Chicken Pox. A case presenting anomalous features was notified in Church Ward,—as possibly one of scarlet fever,—this was removed to the hospital for observation: the case turned out to be one of Chicken Pox.

Enteric Fever. Two cases of this disease were notified, one from Walshaw Ward, and one from Hawkshaw Ward, the last-named from a farm house.

With regard to the Walshaw case, the premises from which it was removed were very old, the amount of cubic space small, and the closet accommodation of the privy midden type; the house adjoined a barn and stable, behind which, formerly, stable refuse was deposited. Nothing could be traced either to the milk, or water supply, nor to the consumption of partially cooked shell fish. It is very probable that this case owes its origin to contamination of food by flies, there being an abundance of these in the house; these pests finding an admirable breeding ground on the stable midden site, and privy midden. I recommend this property as one suitable for early conversion to the water carriage system.

The origin of the Hawkshaw case is more obscure; nothing in this connection could be attributed to the water, or milk supply, nor to the sanitary conveniences. A defective drain was discovered and remedied, this was brought to your notice soon after the case was notified. The patient worked, and partook of meals in an adjoining district, and it is quite possible that the disease may have been contracted there. No deaths occurred from this disease.

The premises in both cases were disinfected, the dejecta also, and the bedding.

Small-Pox. None.

Diphtheria and Membranous Croup. Five cases of this disease have been notified during the year, one from Greenmount Ward, and four from Walshaw Ward, all these cases were removed to the Isolation hospital. In connection with the occurrence of these cases I visited each of the residences from which the cases were removed, and in none of the houses were any serious defects discovered. In two of the houses the closets had been recently converted from the privy midden to the fresh water carriage system, and the drains overhauled. The milk and the water supply were satisfactory, and no disease of a similar character seemed to have been present in any domestic pets kept by the householders.

The premises in each case were thoroughly disinfected, and the schools attended by the children visited with a view to discovery of any cause having a bearing on the causation, but without result.

Three of the five affected were relatives, and two of the cases were removed from one house; the cases occurring at short intervals.

Bacteriological Examinations. Eighteen specimens were dispatched to Professor Delepine at the Public Health Laboratories for bacteriological examination. Five were specimens of sputum, (four examined with a negative, and

one with a positive result). Five were blood specimens, (three with a negative, and two with a positive result.) Eight swabs from the throat were also submitted, of which four gave a positive, and four a negative result.

Arrangements have been made for telegraphic replies as to results obtained in connection with these cases in order that they may be more expeditiously dealt with.

A supply of antitoxin for the treatment of diphtheria cases is arranged for by the Health department, when applied for.

Polio Myelitis. A case of this disease was notified in June last, a boy aged 13 years, attending a day school in the district; father a farmer. The family history of the subject of this notification was found to be very good, and the patient's medical history was also a good one. The boy had an accident to his ankle in infancy; the ankle being bruised by another boy whilst playing. He is one of a family of ten, all living and in good health.

The history of the attack is: that whilst sowing wurzels in a field on May 23rd last, he suddenly felt a pain in his foot, (the one spoken of previously as having been bruised in infancy), and found he could not use it very well, he did not remember injuring it, otherwise he is quite well. He was taken to see a surgeon some days afterwards who notified it on June 4th as Polio-myelitis.

I visited the case the day after and found the patient was out, but after waiting a few minutes he came into the house, he could use both legs and feet very well,—in fact he ran across the farm yard.

The case must have been a very mild one, affecting very possibly the peroneal group of muscles, with marvellously rapid recovery.

No special means were taken with regards this case, except that the boy was kept away from school. There was no other case in the district, nor did any other case occur in the family.

Bakehouses.—(7) These places have been visited during the year, and no serious sanitary defects have been noted. Lime-washing has been done in all cases, and the trade in connection with them has been conducted in a satisfactory manner.

Slaughter Houses. (6)—These places have been regularly visited, and no causes of complaint have been brought in connection with the operations conducted in them. During the year a license has been granted for a new slaughter-house in Church Ward, and as far as is possible every care has been taken to prevent its becoming a nuisance to the neighbourhood in which it has been erected.

I am still of the opinion that the suggestion made by me to the Committee when they were considering the question of granting a license to the new erection, is the best, viz. : that it would be much better if the district provided a public abattoir, because by this means, a better oversight of the carcasses slaughtered could be ensured, and the collection and supervision of matters likely to become a nuisance would be the more easily and effectively brought about ; under the present system there is always the possibility of any of the premises,—situate as they are, in different parts of the district,—becoming a nuisance.

One beast has been slaughtered on farm premises and passed as fit for human consumption.

Dairies and Cowsheds. These have been inspected during the year, and limewashing has been carried out in all cases. Defects noticed in connection with various cowsheds have been brought before the Health Committee from time to time, and in some cases the matters objected to have been remedied, but many matters in connection with cowsheds and farm premises, (notes of which were taken at the time of the visits, notably with regard to repair of premises, and the remedying of various nuisances,) still remain unattended to, and in such cases the orders made require to be enforced.

The average air space in cowsheds remains about 600 cubic feet per head of cattle.

One case of infectious disease—Enteric Fever—has been notified as occurring in a farm house. The case was dealt with by removal to the hospital and attention given to disinfection of the premises and bedding, etc. A defective drain in connection with the house was also rectified. The person affected was not engaged in dairy work, being occupied in a weaving shed in another district.

The milk supply of the district is good, and no prosecutions have been instituted during the year.

Water Supply. The greater part of the district is supplied with water for domestic and drinking purposes from the reservoirs of the Bury & District Joint Water Board.

The supply has been sufficient and, on the whole, satisfactory. Complaints have been received occasionally of the presence of much suspended matter in the water, from different parts of the district, often widely separated, generally when flushing operations have been in progress.

During the year I investigated the condition of the water supply in a portion of your district which is not supplied with water from the Joint Board's mains, and in November last I reported to the Health Committee on this matter as follows :

“ In the course of a general survey of the district I visited the hamlet of Affetside, which is situated on the summit of a range of hills to the north-west of the centre of this village (Tottington), in the Chapel Ward of the Urban District, and about 889 feet above the sea level. Representations have been made to me by residents of this hamlet on the condition of, and difficulty in obtaining, water for domestic use. I therefore visited this district on the 22nd of October last, and found that the part of the hamlet which comes within the scope of this enquiry consists of some 20 houses, together with a public house, a public elementary school, and a few farm houses.

The population of the area affected is about 70 persons, excluding children attending the day school.

The water supply available may be said to be derived from seven sources, all being wells, of varying depths and capacities (surface wells). The wells supplying the farm houses, two in number, seemed to be in a fairly good condition and well cared for, and no complaints were made by the tenants either as to the quantity or quality of the water supplied from them.

The public house is provided with a well of its own, which was said to yield a constant supply of good quality. The remaining houses—Nos. 38 to 94 Watling Street—and the day school are dependent on four wells for their supply, viz.,

- (1) A well near houses nos. 38 to 42 Watling Street, and the school.
- (2) A well situated in the cellar of house no. 54.
- (3) A well situated at the gable end of house no. 88 Watling Street.
- (4) A well situated about a quarter of a mile from the nearest house, and in the adjoining parish of Bradshaw.

WELL No. 1 is said to give a fair yield of water, but on account of its proximity to the houses nos. 38 and 42 I should regard its quality with suspicion.

WELL No. 2 at the time of my visit was absolutely dry, and there was marked evidence of serious pollution. The water of this well is, in my opinion, quite unfit for domestic use (drinking purposes). It is, however, a private well.

WELL No. 3. This well is also polluted, and is, in my opinion, dangerous to use for drinking purposes.

WELL No. 4. This is a shallow well and, as before stated, is situated a quarter of a mile from the nearest house, in the district of another Authority. Although this well is inconveniently situated and insufficiently protected it is the best well of the four mentioned and the only one really advisable to use, since its supply is derived from uncultivated moorland.

Summarised, the difficulties of the inhabitants of this hamlet are :—

(1) Their dependence, practically, on one well for the supply of potable water.

(2) The periodical failure, in very dry summers, of this source, the fact that cattle use it, and the distance this water has to be carried in all conditions of the weather.

The alternatives are: Dependence on the generosity or courtesy of the owner of the public house well, or on that of the tenants of the two farm houses, who have each a supply of their own.

The question is one of long standing, and is, in my opinion, an urgent one."

Owing to the probable pollution of wells nos. 1, 2, and 3, and the inconvenient situation of well no. 4, the owner of the Pack Horse Hotel was interviewed with a view to ascertaining whether he would be willing to allow the use of this well for the inhabitants, provided that analysis of the water gave a good result, and he consented to allow such use. The water would then be piped to a stand in the roadway outside the public house premises.

Accordingly a sample of water from the Pack Horse well was sent on the 1st December last to Professor Delepine, of Manchester, and reported upon by him on the 5th December as follows :

COPY OF ANALYSIS.

Colour.....Greenish blue

Turbidity ... Very slight

Smell Indistinct

Oxygen absorbed at 27° in 4 hours in acid solution ... 0·019

Free and Saline Ammonia—as NH_3 0.0006

Albuminoid Ammonia	0.0048
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Nitrous Nitrogen „ absent

Nitric Nitrogen ,, 1·250

Chlorides	as Chlorine	4.30
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Phosphates as H_3PO_4 presentHardness as CaCO₃

Temporary nil

Permanent17.00

	Total17:00
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Reaction — Lacmoid—acid

Methyl Orange--alkaline

Phenolphthalein—acid

Action on bright lead foil, 24 hours exposure, 2·00

The numerical parts are expressed in parts per 100,000.

Bacteriological Analysis :—

Average result of three Examinations.

A.

Aerobic micro-organisms growing in three days in nutrient gelatine at 20° C. to 21° C.

Non liquefying bacteria	87	} Number of colonies in One gramme of water
Liquifying bacteria ...	3	

B.

Number of kinds of bacteria clearly recognisable.

Non liquefying bacteria	3
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Liquefying bacteria	1
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Bacteria associated with sewage or faecal pollution—
Bacillus Coli Communis.

Professor Delepine's remarks on the sample of water submitted are :—

“I suppose that this water has been collected and forwarded according to directions, in which case the bacterial contents are in excess of what they should be in the case of a good well water. There is, however, no evidence of pollution. Chemically, the water is richer in chlorides than surface waters are generally in the district, the water, though moderately hard, has a greater action on lead than is desirable. This water cannot be considered as good for drinking purposes.”

Following the consideration of the report on the analysis of this water a copy was sent to the persons interested, coupled with the recommendation that the water obtained from this source should be boiled before using, or not used at all.

Schools. I have visited all the schools in the district during the year. The Wesleyan and St. John's Free Church schools, in connection with the prevalence of measles in the early part of the month of March the first-named school was closed for a period, from 13th to 20th March.

The Parish Church schools were visited in April, and here the attendance was fairly good. Walshaw Schools were visited in June. Owing to the prevalence of measles in this part of the district these schools were disinfected and cleaned.

Hawkshaw schools were visited in June, and fumigated in consequence of the occurrence of a few cases of scarlet fever in this Ward.

Greenmount schools were visited in July. In this case the attendance in the Infant Department was very bad owing to illnesses of a general character. These schools were also disinfected.

Affetside schools were visited in October.

I have also visited the schools in connection with the notification of isolated cases of infectious disease.

Zymotic Diseases. Basing the zymotic death rate on the zymotic diseases of the English Registrar General : only two cases of death have resulted from this group of diseases, one from measles and one from diarrhœa ; and the death rate per 1000 is ·290, against ·585 per thousand in the year 1912.

The following table shows the death-rates resulting from this cause in previous years :—

In 1899 the death rate from this cause was 1·47 per thousand

1900	„	„	„	1·27	„
1901	„	„	„	1·75	„
1902	„	„	„	·49	„
1903	„	„	„	1·9	„
1904	„	„	„	15·5	„
1905	„	„	„	1·08	„
1906	„	„	„	1·21	„
1907	„	„	„	·58	„
1908	„	„	„	·144	„
1909	„	„	„	·42	„
1910	„	„	„	·69	„
1911	„	„	„	1·18	„
1912	„	„	„	·585	„
1913	„	„	„	·290	„

Scavenging. This has been let out, as in former years, by contract, and the work has been satisfactorily done by the Contractors.

During the year 101 privies have been converted to fresh water closets, and 4 privies to the pail system, and increased **water closet accommodation** (10), has also been provided at Copt Hill, a total of 120 conversions against 90 in the year 1912, and 16 in 1911, respectively.

There are at the present time 572 privy middens in the district ; this number *does not include* middens in connection

Factories and Workshops Act.

I have visited each of the factories and workshops during the year. The factories in the district comprise 6 weaving sheds, 1 calico printing establishment, 1 cloth bleaching works, 1 steam laundry, and 1 cotton waste bleaching works.

The workshops comprise 1 tin and copper smith, 1 blacksmith's shop, 3 plumbers, 3 joiners, 1 cabinet maker, 1 iron foundry, 1 brushmaker, and 7 confectioners and bakers.

Weaving Shed, No. 1. Situate in the Walshaw portion of the district, and employing about 430 persons of both sexes, mostly females. No nuisances have occurred in connection with these works. The sanitary arrangements consist of 20 separate offices, with two urinals. These offices are arranged in different parts of the mill, in groups of six, and five pails in connection with the weaving sheds, and three others on the water carriage system in the winding department, which is situate in an upper story. All are clean and in good order. Limewashing was in progress on the occasion of my visit. Special means of egress are provided to those portions of the mill which are higher than one storey.

Weaving Shed, No. 2. Situate in Chapel Ward, and employing about 380 persons of both sexes. The sanitary conveniences consist of 15 closets and one urinal, all being situate outside the sheds.

In July of the year under review, Messrs. W. Hoyle & Co., the owners of these weaving sheds, introduced a new method of humidifying and ventilating them by Lohrman & Sichtig's plan, by means of which the amount of humidity in the air of the sheds, as well as the admission of fresh air, can be regulated, thereby allowing the sheds to be cooled by direct admission of air from the outside in summer, and warmed in winter by heating the air and water in a mixing valve before its admission to the shed.

On the occasion of my visit I was most favourably impressed by the clear state of the air in the shed, there being a complete absence of condensed steam in it, and I was easily able to see from one end of the shed to the other, and to distinguish the faces of those employed on the opposite side. The temperature of the shed was not in the least objectionable, and I noticed that there was a steady and free circulation of the air throughout the shed, without the creation of perceptible draught.

I understand that a certain amount of humidity in the air of weaving sheds is both desirable and necessary for the proper manufacture of cotton cloths, however pure the cotton may be, and more especially is this the case where heavily sized goods are manufactured. In fact moisture (aqueous vapour) is always present, in varying amounts, in the outside air, on an average 1 to $1\frac{1}{2}$ % of its volume in this country; and from 75 to 84 % of the amount required for complete saturation (in Lancashire).

The moisture admitted into the sheds, by the method of Lohrman and Sichtigs, and adopted by Messrs. Hoyle & Co., consists of water in a very fine state of sub-division—atomised water—which is emitted from distributing tubes as an almost imperceptible spray, (the tubes being placed a little higher than mid-way between the floor and the roof of the shed,) and which does not wet the clothing of the operatives as condensed steam in the air would do. This mixture of warmed air with the moist vapour is distributed evenly through the sheds by means of fans, (driven by the machinery of the shed,) which are enclosed in boxes connected with the distributing tubes, thereby securing the admission and even distribution of humidified fresh warmed air in every part of the building.

In this connection I have pleasure in giving the result of an analysis of the air of these sheds, collected since the

introduction of the new ventilators, and undertaken by Mr. Percy Bean, F.C.S. of Manchester, a well-known expert in these matters; the analysis of the air was made in September last, and the particulars of the analysis have been supplied to me through the courtesy of Mr. W. Hoyle.

Temperature of the air outside the shed, 74° F.

„	„	inside the shed,	
		Dry bulb	Wet bulb
		77	72½
		76	70½

Old Shed		New Shed	
Carbonic acid in parts per 10,000 volumes		Carbonic acid in parts per 10,000 volumes	
No. 1	9·27		9·37
„	9·09		7·81
„	9·37		8·91

Giving an average of 8·97 carbonic acid per 10,000 volumes of air.

The amount of carbonic acid in the air outside the shed on the same day the analysis was made was 4·34 per 10,000.

The difference between the CO ₂ of the air inside the shed, and the outside air was		8·97
		4·34
		<hr/>
		4·63

When one considers that results of analysis of different samples of air collected by Mr. Bean from (1) a well-ventilated room (near the floor) showed 6 to 8 parts of carbonic acid; (2) air from an operative's house 11·1 per 10,000; (3) a bedroom in the morning 9·2 per 10,000; (4) a billiard room in town 16·65 per 10,000; (5) a church, in the basement 23·3 per 10,000, and in the gallery of the same 52·2 per 10,000; (6) Police Court 15·5 per 10,000; and (7) the Royal Exchange 23·3 per 10,000; the condition of the air in the sheds of Messrs. Wm. Hoyle is pure by comparison, and

speaks well for the efficiency of the apparatus installed by them.

The apparatus also greatly minimises the quantity of dust in the air, this being drawn towards the tubes by the action of the fans, which revolve at a high rate of speed, and which then comes in contact with a very fine grating, thus preventing its entry into the distributing tubes and ensuring its removal from the air of the shed. Size, used in the preparation of the material used in weaving, flies off as dust to a greater extent in a dry atmosphere, and the humidity is necessary to keep this down. By way of contrast I am enabled to state on the authority of Mr. Percy Bean that the average state of the air in Lancashire dry sheds is from 18 to 20 parts of carbonic acid per 10,000 volumes, and that the average of a series of analysis of air taken from a dry shed (1200 looms) in Lancashire on 14th November, 1913, was 24·8 of CO₂ per ten thousand volumes.

I am of opinion that the introduction of this system will render the conditions under which the weavers have to work much better, because the ventilation is vastly improved, the amount of moisture in the air can be regulated, and the temperature of the air can be maintained at a reasonable level. The dust and fluff arising in the process can be removed to quite an appreciable extent.

Weaving Shed No. 4. Situate in Walshaw Ward, and employing about 191 persons, of both sexes. The sanitary accommodation is sufficient, and maintained in a cleanly condition.

Weaving Shed No. 5. Situated in Hawkshaw Ward and engaged in the manufacture of towels. Two closets, situated outside the mills, are provided, on the conservancy system. No sewer is available in the neighbourhood. The building has special means of escape in case of fire.

Weaving Shed No. 6 is situated in the Hawkshaw Ward and employs about 198 persons, of both sexes.

There are 15 closets—on the conservancy system—in connection with these works ; the closets and receptacles for fæces are situated entirely outside the mill buildings, access to the closets being obtained from inside the mill by means of a doorway, leading into a passage which is open in its entire length (above) to the outside air. No complaints from persons employed at these works have been received by the Sanitary Department, and from enquiries made by myself and the Sanitary Inspector—Mr. L. Kenyon, who accompanied me on the occasion of my visit to the works—of the management, no complaints had been made to the latter by any persons in their employ.

The existing arrangement, owing to the situation of the buildings, is the only one feasible until the completion of the sewer in this portion of the district.

The receptacles had been recently emptied on the occasion of our visit : no smells were noticed in the closet, except that arising from a liberal use of some product of carbolic acid. The only cause for complaint arose from the seating of one closet not having been recently cleaned.

All the sheds have been limewashed during the year.

Calico Printing Works. Situated in the Greenmount Ward, and employing about 435 persons, mostly males. The sanitary conveniences are sufficient for the numbers employed and consist of nineteen closets on the pail system, no sewer being available in this part of the district.

Complaints have been made during the year of a smoke nuisance arising from a chimney in connection with these works. The matter has been dealt with by the Health Committee, and the management were communicated with on the subject. The nuisance was probably due to defective stoking, which, I think, has now been remedied.

Cloth Bleaching Works. Situated in Hawkshaw Ward, and employing upwards of 150 persons of both sexes. The sanitary conveniences at these works have been entirely

reconstructed on the best principles available (pails), there being no sewer in this part of the district. There are 19 separate closets—12 for males and 7 for females—and urinals are provided for the former. All these conveniences are situated outside the works entirely.

Extensions to these works have been made, and the question of drainage in rooms where wet processes are conducted has been adequately dealt with, and brought thoroughly up to date.

The ventilation of rooms where much steam is given off in trade processes has been thoroughly dealt with and with great success, the method adopted meeting all requirements.

Cotton Waste Bleaching Works, situated in Greenmount Ward, and employing about 90 persons. The sanitary accommodation consists of two closets. At the time of my visit I complained of the condition and adequacy of these offices, and received assurance that they would be dealt with at an early date, and that the question of reconstruction was under consideration.

The trade processes in all the works in the district have, as far as I am able to judge, been conducted in a satisfactory manner, and the premises and offices connected with them maintained in a clean condition. No case of disease arising from the pursuit of any particular trade has come under my notice during the year.

Housing (Inspection of District) Regulations. During the year 1913 I have made various inspections of dwelling houses in the district, under and for the purposes of the Housing Regulations made under the Act of 1909.

The number of houses inspected was 140, against 47 in 1912, and 130 in 1911. The class of house inspected was of the older variety, for reasons explained in my annual report for the year 1912, viz., that this class of property is in more urgent need of attention than houses whose construction is of a later date. I think that, provided inspections are made

in the same proportions this year as last, we shall practically complete the examination of the older type of house.

In connection with the inspection I recommended the Committee to issue a closing order with respect to two houses of the back-to-back type; the order was served but has not yet become operative.

The average rent of the houses inspected was $3/9\frac{1}{2}$ per week; the rents varied from 1/- to 5/6 per week—farm houses and public houses being excluded in this estimate.

The houses examined were all occupied by persons of the working class, who in some cases were the owners as well.

We estimate that there are about 1629 inhabited houses in the district at the time of writing this report, and in my opinion the demand for houses suitable for the working classes exceeds the supply. Only ten new houses have been erected during the year, viz.,

In Church Ward	4
Greenmount Ward	2
Walshaw Ward	4
	—
	10

The types of houses inspected were:—

Through houses	91
Single	47
Back-to-back	2—140

The STRUCTURAL APPEARANCE of the houses inspected was generally satisfactory, as seen from the outside, the walls and roofs having been well constructed. The principal fault was that repairs have not been executed at sufficiently regular intervals to compensate for the ravages of time.

DAMPNESS. When noted, this seemed to have been due chiefly to neglect of repair of roofs and to proper pointing of the stone or brickwork, and, to a lesser extent, to insufficient troughing, or to the presence of higher ground in the rear of house walls.

DRAINAGE OF HOUSES. The drains in connection with the class of houses inspected, were for the most part of a very old date and the course uncertain, consequently the exact condition of them was very difficult to make out; in cases where the condition was bad, or likely to become so, notes here made at the time of examination, and brought under the notice of the Committee. When orders are served on an owner in this connection they should be followed up and strictly enforced.

WATER SUPPLY. With the exception of about third houses situated in outlying parts, and farm houses, all the houses inspected were supplied by water from the Joint Board mains, and was found to be satisfactory. In other cases specially reported upon by me the supply was inefficient and unsatisfactory. Some cases of defective wells in connection with farm houses have been noted and brought under your notice. These matters, where not remedied by the owners, within a reasonable time, should be followed up and the orders enforced.

The **CEILINGS** in some of the houses inspected were found to be defective, and, in a few of them, in a dangerous state, chiefly in bedrooms.

The provision made around dwellings for a **FREE CIRCULATION OF AIR** was found to be sufficient, and no case arising under this heading has been noticed.

The main facts brought to light from the inspections of the year are:—

Defective water supply in some of the out-lying districts, and in connection with some of the farm houses; and the curious and fairly general objection of occupiers to the admission of fresh air into their bedrooms. Other features noticed come under the heading of general rather than special nuisances.

Summary of matters inspected.

Number of houses	...	...	...	140
General character of defects found :—				
Dampness due to defective roofs	...			24
„ „ walls	...			66
Defective drains	...	...	..	16
„ connection of rainwater pipes				7
„ sink pipes	...	...	...	21
„ gullies	...	...	...	4
„ closets and ashpits	...		...	37
Premises requiring renovation			...	37
Insufficient window area to open			...	74
Defective floors	...	...	...	21
Defective ceilings	...	...	...	24
Insufficient water supply		...	...	13
Insanitary condition of yards			...	3
Fireplaces stopped up	...	...	...	15
Defective state of stairs		...	...	5
Insufficient troughs	...	...	...	12

Number of dwelling houses defects in which were remedied without the making of closing orders ... 47

Average rent of the houses inspected was $3/9\frac{1}{2}$ per week, and varied from 1/- to $5/6$ per week, excluding public houses and farm houses.

Types of houses inspected :

Through houses	...	...	...	91
Single „	...	...	...	47
Back-to-back „	...	...	...	2

Number of orders served on owners	...	...	47
„ closing orders „	...	...	2

Number of new houses erected in the district during the year :

Chapel Ward	...	...	...	0
Church Ward	...	...	...	4
Greenmount Ward	...	...	...	2
Hawkshaw Ward	...	...	...	0
Walshaw Ward	...	...	...	4
				<hr/>
				10

Number of houses unfit for habitation ... 2

ROOMS. The number of rooms was two down and two upstairs in the majority of houses—excepting public houses and farm houses—together with a small food store, and perhaps a coal place. The cubic space, generally speaking, was found sufficient.

The FLOORS in the living rooms are for the most part flagged, and in the upper rooms boarded. Very few of the houses were cellared, and where these were found they were not, as a rule, used.

FOOD STORAGE. No special provision is made for this, but taking into consideration the habits of this class of people and the methods of purchase, no inconvenience is likely to arise from the absence of special accommodation in the class of houses examined. In the newer houses provision is generally made for food storage.

BEDROOMS were in all cases found to be situated on the first floor, and were fairly large. The chief objectionable features were, as mentioned in previous reports, the great neglect of the admission of fresh air by the windows, these being in many cases deliberately fastened up. The fire places also, we found in a fair proportion of cases, had been blocked up, to prevent, so I was informed, down draught.

The dangers to health likely to arise from these practices were pointed out to the occupiers, and orders made on owners to remedy the nuisance whenever found.

The stairs leading to bedrooms were found to be defective in a few cases, and insufficiently lighted.

YARDS. This space, which is as a rule liberal enough, is generally placed in the rear of premises, but in some cases is found in the front of dwellings; in the majority of cases the yard space was found to be quite sufficient, and very few cases of insanitation were noticed. I think it advisable that all these spaces should, where possible, be flagged or asphalted.

SANITARY CONVENIENCES of houses inspected were of the privy midden type. It ought to be stated, however, that a considerable proportion of the 140 premises inspected during the year were situated in the country parts of the district where it is not possible to deal with them by conversion to the water carriage system. In these cases the next best means of preventing these structures from becoming a nuisance has been adopted.

ANIMALS. No nuisances have been notified as arising from the keeping of animals in the houses inspected.

The orders served on owners to remedy defects, and abate nuisances complained of, have been fairly well complied with. Where special circumstances have existed or have arisen in connection with the execution of orders served on owners, an extension of time has been granted in which to complete the work demanded. Some outstanding work still requires to be done, and where the privilege granted by the Council as to extension of time for the execution of the repairs demanded in the order is abused, further and more stringent action should be adopted to ensure the carrying out of the Council's order.

One case of over-crowding has been brought before your Council during the year, and notice served upon the persons concerned to remedy the condition.

The tables relating to the number of births, deaths, and infectious diseases which have occurred during the year will be found embodied in this report, and the usual tables of statistics, relative to age distribution and localities will be found in the appendix.

The Annual Report of the Sanitary Inspector (Mr. L. Kenyon), to whose assistance I am indebted for special items of information on the various sanitary matters arising and dealt with during the year, is included in this report.

I have also to express my thanks to the Council for the courtesy and consideration extended to me.

I am,

Your obedient servant,

ARTHUR H. POOLE, M.D.

Medical Officer of Health.

Tottington,

6th February, 1913.

Sanitary Inspector's Report.

To the Chairman and Members of the
Tottington Urban District Council.

Gentlemen,

I have pleasure in submitting a Report on the sanitary work dealt with in the District during the year ending 31st December, 1913.

Sanitary requirements attended to	238
Number abated.....	223
Number of notices served	28

CLASSIFICATION.

Privy and Ashpit nuisances	36
Defective Privies and Ashpits	118
Insufficient Ashpit accommodation	2
Defective drainage of premises	70
Bakehouses requiring limewashing	2
Miscellaneous nuisances	6
Insufficient water supply to Farms	2
Overcrowding	2
	<hr/>
	238
Houses disinfected	24
Schools ,,	5
Smoke observations taken	18
Number of privies converted into fresh water closets ...	101
,, ,, ,, waste ,, ...	3
,, ,, ,, pail closets.....	4
,, waste water closets converted into fresh w.c.s	1

Periodical visits have been paid to the farms in the District, and the attention of several of the owners has been drawn to matters where improvements could be effected.

Registration of cowkeepers, purveyors of milk, &c., has been kept up-to-date.

The licensed slaughter-houses have been regularly visited and the premises are maintained in a satisfactory condition. The meat has been of good quality.

There has been one case of slaughtering on farm premises—that of a cow; the carcase was passed for human consumption.

It is interesting to note the increased number of conversions of privies to fresh water closets during the year. In carrying out this work it often enables a better inspection of the drainage system to be made, and numerous defects are revealed in this manner, resulting frequently in having the property re-drained.

The house refuse is removed under contract, and is performed in a satisfactory manner. The complaints have been less numerous than for the previous year. The extended use of ashbins is to be noted, as where a privy conversion takes place an ashbin is practically always adopted in lieu of an ashpit.

The following work has been done by the Contractors:—

Ashbins emptied.....	1387
Ashpits ,, 	1768
Pails ,, 	5370
Cesspools ,, 	40

I desire again to record my thanks to the Chairman and members of the Health Committee for the assistance and courtesy extended to me during the year.

I remain, Gentlemen,

Yours obediently,

L. KENYON,

Sanitary Inspector.

TABLE I.

TOTTINGTON DISTRICT.—Vital Statistics of Whole District during 1913 and previous Years.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		Deaths of Non- residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.		
		Un- corrected Number	Number.	Rate	Number.*	Rate			Under 1 year of age		At all ages.
									Number.*	Rate.	
I	2	3	4	5	6	7	8	9	10	12	13
1908	6573	113	113	17.19	82	12.47	0	8	11	97.34	13.69
1909	6638	127	127	19.13	88	13.25	0	8	15	118.11	14.46
1910	6703	122	122	18.20	75	11.18	0	9	17	139.34	12.53
1911	6769	123	123	18.17	80	11.81	2	10	13	105.69	13.00
1912	6834	107	107	15.66	59	8.63	3	17	10	93.45	10.68
1913	6890	119	119	17.27	68	9.86	2	9	5	42.01	10.88

Area of District in acres (exclusive of area covered by water)... 2655.

Total population at all ages... 6769. (Census 1911.) Number of inhabited houses... 1629.

Average number of persons per house... 4.22

* Rates in Columns 4, 8, and 13 calculated per 1000 of estimated population.

TABLE II.
Cases of Infectious Disease notified during the Year 1913.

Notifiable Diseases,	Cases Notified in whole District.					Total Cases Notified in each Locality.					Total cases removed to Hospital	Deaths in Hospital of Patients removed from this District
	At Ages—Years.					Chapel Ward.	Church Ward.	Greenmount Ward.	Hawkshaw Ward.	Walshaw Ward.		
	At all Ages.	1 to 5	5 to 15.	15 to 25	25 to 45								Over 45.
Diphtheria.....	5	3	2		1	3	1	1		4	5	
Erysipelas	4				1					2	0	
Scarlet Fever	10	3	6		1		2		5	3	8	
Enteric Fever	2			1	1				1	1	2	
Poliomyelitis.....	1		1								0	
Pulmonary Tubercul's	8			3	3	2	2		5	1	4	
Other forms „ ...	8		3	4	1		2	1	1	4	3	
Chicken Pox.....	1	1					2	1			1	
Totals.....	39	7	12	8	7	5	7	3	8	14	23	

TABLE III.
DISTRICT OF TOTTINGTON.
Causes of and ages at Death, during 1913.

CAUSES OF DEATH. 1	NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.								TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT. 10
	All ages 2	Under 1 year. 3	2 and under 5 4	5 and under 15. 5	15 and under 25. 6	25 and under 45 7	45 and under 65. 8	65 and upwards. 9	
All causes { Certified, all Uncertified	75	5	2	1	1	8	24	34	There are no Institutions in the District for the sick and infirm.
Measles	1		1						
Phthisis, (Pulmonary Tuberculosis)	3					2	1		
Cancer, malignant disease	6		1			1	3	1	
Rheumatic Fever	1						1		
Organic Heart Disease...	15					1	3	11	
Bronchitis	6	2					1	3	
Pneumonia	3	1				2			
Diarrhœa and Enteritis	1							1	
Nephritis & Brights d's'e	1						1		
Suicide	2					1	1		
Other defined diseases...	22			1			12	9	
Diseases ill-defined or unknown	14	2			1	1	1	9	
All causes	75	5	2	1	1	8	24	34	

TABLE IV.

**Infant Mortality during the year 1913. Nett Deaths from stated causes
in Weeks and Months under One Year of Age.**

CAUSES OF DEATH.	Under 1 week	1-2 weeks.	2-4 weeks.	Total under 1 month.	1-3 months.	3-6 months	6-9 months.	9-12 months.	Total deaths under 1 year
All causes, certified ...	0	1	0	1	0	1	1	2	5
Convulsions		1		1			1		2
Bronchitis						1		1	2
Pneumonia (all forms)								1	1
	0	1	0	1	0	1	1	2	5

Factories, Workshops, Workplaces, and Homework. **I.—Inspection of Factories, Workshops, and Workplaces.**

	Inspections.	Number of Written Notices.	Prosecutions.
Factories, (Including Factory Laundries)...	... 18	...	...
Workshops, (including Workshop Laundries) ...	... 19	...	...
Workplaces, (other than Outworkers' premises included in Part 3 of this Report)	... 0	...	...
Total	37	0	0

2.—Defects found in Factories, Workshops and Workplaces.

	Number of Defects—Found.	Remedied.
Want of Cleanliness ...	1	1
Sanitary accommodation— ... insufficient	1	1
... unsuitable or defective	1	0
Breach of special sanitary requirements for bakehouses, (ss. 97 to 100)	2	2
	4	3

3.—Home Work.—No Home Work under any of these headings.

4.—Registered Workshops.

Cabinet Maker ...	1	Ironfounders ...	1
Brush Making ...	1	Joiners and Builders...	3
Tin and Coppersmiths ...	1	Wheelwrights...	1
Blacksmiths ...	1	Bakers and Confectioners ...	7
Plumbers ...	3		
Total No. of Workshops on Register	19		

5.—Other Matter.

Failure to affix Abstract of the Factory and Workshops Act (s. 133)
 Action taken in matters referred by H.M. Inspector (Notified by H.M. Inspector, ... 0
 as remediable under the Public Health Acts, but
 not under the Factory and Workshop Act (s. 5) { Reports (of action taken) sent to H.H. Inspector 0
 Other .. Fire Escape (want of) notified by H.M.I.

